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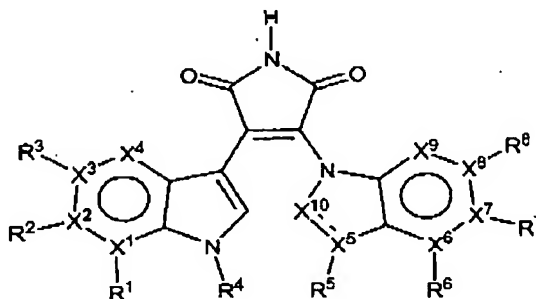
JUN 27 2007

Amendments to the Claims:

This listing of claims replaces all prior versions of claims in the application

1-30 (cancelled)

31. (currently amended) A compound represented by the following formula:



or a pharmaceutically acceptable salt thereof  
wherein:

$X^1 - X^3$  are independently C or N;

$X^4$  is CH or N, wherein not more than two of  $X^1 - X^4$  is N;

$X^6 - X^8$  are independently C or N;

$X^9$  is CH or N, wherein not more than two of  $X^6 - X^9$  is N;

$X^5$  is N,  $R^5$  is a lone pair, and  $X^{10}$  is CH, when the bond between  $X^5$  and  $X^{10}$  is a double bond; or

$X^5$  is CH,  $R^5$  is H, and  $X^{10}$  is  $CH_2$ , when the bond between  $X^5$  and  $X^{10}$  is a single bond; or

$X^5$  is C,  $R^5$  is defined below, and  $X^{10}$  is CH, when the bond between  $X^5$  and  $X^{10}$  is a double bond;

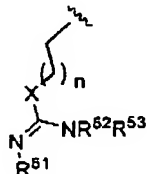
$R^1 - R^3$  and  $R^6 - R^8$  represent a lone pair or O when each respective  $X^1 - X^3$  and  $X^6 - X^8$  is N; or

when  $X^1 - X^3$  or  $X^6 - X^8$  is C, each respective  $R^1 - R^3$  and  $R^6 - R^8$  is independently selected from the group consisting of:

- a) H, substituted or unsubstituted C(1-8) alkyl, halogen, azido, cyano, nitro, or  $NR^{21}R^{22}$ , wherein  $R^{21}$  represents H or C(1-8) alkyl, and  $R^{22}$  represents H, substituted or unsubstituted C(1-8) alkylcarbonyl, substituted or unsubstituted arylcarbonyl, heterocycle, substituted or unsubstituted heteroarylcarbonyl, substituted or unsubstituted C(1-8) alkylaminocarbonyl, substituted or unsubstituted arylaminocarbonyl;
- b)  $OR^{23}$ , wherein  $R^{23}$  is H, substituted or unsubstituted alkylcarbonyl, substituted or unsubstituted arylcarbonyl;
- c)  $SR^{23}$ , wherein  $R^{23}$  is defined as in b);
- d)  $O(CH_2)_jR^{24}$ ,  $O(CH_2)_j-O-R^{24}$ , or  $O(CH_2)_j-S-R^{24}$ , wherein j is an integer from 1 to 8, and  $R^{24}$  is selected from the group consisting of H, substituted or unsubstituted C(1-8) alkyl, substituted or unsubstituted aryl, substituted or unsubstituted heteroaryl;
- e)  $S(CH_2)_jR^{24}$ ,  $S(CH_2)_j-O-R^{24}$ , or  $S(CH_2)_j-S-R^{24}$ , wherein j and  $R^{24}$  are defined as in d);
- f)  $C\equiv C-R^{25}$ ,  $C\equiv C-OR^{25}$ , or  $C\equiv C-CO_2R^{25}$ , wherein  $R^{25}$  is H, substituted or unsubstituted C(1-8) alkyl, aryl, substituted aryl, heteroaryl, or substituted heteroaryl;
- g)  $CH=CH-R^{25}$ ,  $CH=CH-OR^{25}$ , or  $CH=CH-CO_2R^{25}$ , having a stereochemistry of E or Z, and  $R^{25}$  is defined as in f);
- h)  $C\equiv C-NR^{25}R^{26}$  or  $C\equiv CCONR^{25}R^{26}$ , wherein  $R^{25}$  is defined as in f), and  $R^{26}$  is defined as  $R^{25}$ , and  $R^{25}$  and  $R^{26}$  are selected independently;
- i)  $CH=CH-NR^{25}R^{26}$  or  $CH=CHCONR^{25}R^{26}$ , having a stereochemistry of E or Z, wherein  $R^{25}$  and  $R^{26}$  are independently defined as in h);
- j)  $(CH_2)_kR^{25}$ ,  $(CH_2)_k-COOR^{25}$ , or  $(CH_2)_k-OR^{25}$ , wherein k is an integer from 2 to 6 and  $R^{25}$  is defined as in f);
- k)  $(CH_2)_kNR^{25}R^{26}$ ,  $(CH_2)_kCONR^{25}R^{26}$ , wherein  $R^{25}$  and  $R^{26}$  are selected independently, and  $R^{25}$  and  $R^{26}$  are defined as  $R^{25}$  in f); and
- l)  $CH_2XR^{27}$ , wherein X is O or S and  $R^{27}$  is H, substituted or unsubstituted C(1-8) alkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl;

$R^4$  is selected from the group consisting of:

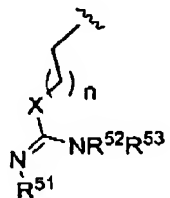
- m) H, substituted or unsubstituted C(1-8) alkyl; and
- n)



wherein  $X=O$ ,  $S$ , or  $NH$ ,  $n=1$  to  $4$ ; and wherein  $R^{51}$  is  $H$ ;  $R^{52}$  and  $R^{53}$  are independently chosen from the group consisting of  $H$ , substituted or unsubstituted C(1-8)alkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, or  $R^{51}$  and  $R^{52}$  are combined to form a heteroalkyl, substituted heteroalkyl, heteroaryl, or substituted heteroaryl ring system;

$R^5$  is selected from the group consisting of:

- ~~e) a lone pair when  $X^5$  is  $N$ ; or~~
- ~~when  $X^5$  is  $C$ ,  $R^5$  is selected from the group consisting of:~~
- p)  $H$ , substituted and unsubstituted C(1-8) alkyl; and
- q)



wherein  $X=O$ ,  $S$ , or  $NH$ ,  $n=1$  to  $4$ ; and wherein  $R^{51}$  is  $H$ ;  $R^{52}$  and  $R^{53}$  are independently chosen from the group consisting of  $H$ , substituted or unsubstituted C(1-8) alkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, or  $R^{51}$  and  $R^{52}$  are combined to form a heteroalkyl, substituted heteroalkyl, heteroaryl, or substituted heteroaryl ring system; ~~or.~~

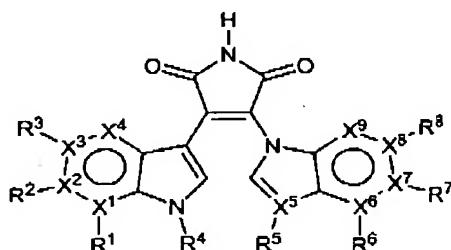
~~wherein when  $R^1$ ,  $R^3$  and  $R^5$  are  $H$ , and  $R^4$  is  $H$  or  $CH_3$ , then at least one of  $X^1-X^9$  represents a ring member other than carbon.~~

32. (currently amended)

A compound, according to claim 31, in which  $X^1-X^3$

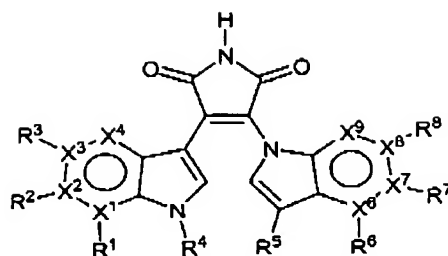
are independently  $C$ .

33. (currently amended) A compound, according to claim 31, in which  $X^4$  is CH.
34. (currently amended) A compound, according to claim 31, in which  $X^6 - X^8$  are independently C.
35. (currently amended) A compound, according to claim 31, in which  $X^9$  is CH or N.
36. (currently amended) A compound, according to claim 31, in which  $X^5$  is C,  $X^{10}$  is CH and the bond between  $X^5$  and  $X^{10}$  is a double bond.
37. (withdrawn) A compound, according to claim 31, in which  $X^5$  is N,  $R^5$  is a lone pair,  $X^{10}$  is CH and the bond between  $X^5$  and  $X^{10}$  is a double bond.
38. (currently amended) A compound, according to claim 31, in which  $X^5$  is CH,  $R^5$  is H,  $X^{10}$  is  $CH_2$  and the bond between  $X^5$  and  $X^{10}$  is a single bond.
39. (currently amended) A compound having the following formula:



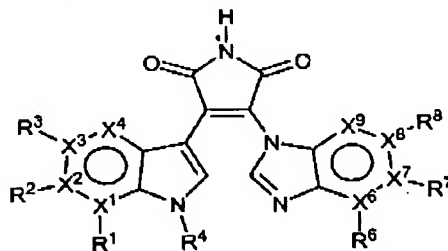
wherein  $X^5$  is C or N, and  $X^1 - X^3$ ,  $X^4$ ,  $X^6 - X^8$ ,  $R^1 - R^3$ ,  $R^4$ ,  $R^5$  and  $R^6 - R^8$  are as defined in claim 31.

- 40 [[10]]. (currently amended) A compound having the following formula:



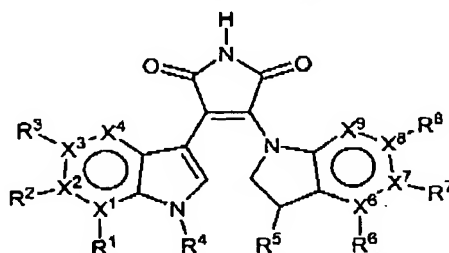
wherein  $X^1$ - $X^3$ ,  $X^4$ ,  $X^6$ - $X^8$ ,  $R^1$ - $R^3$ ,  $R^4$ ,  $R^5$  and  $R^6$ - $R^8$  are as defined in claim 31.

41[[11]]. (withdrawn) A compound having the following formula:



wherein  $X^1$ - $X^3$ ,  $X^4$ ,  $X^6$ - $X^8$ ,  $R^1$ - $R^3$ ,  $R^4$ ,  $R^5$  and  $R^6$ - $R^8$  are as defined in claim 31.

42[[12]]. (currently amended) A compound having the following formula:



wherein  $X^1$ - $X^3$ ,  $X^4$ ,  $X^6$ - $X^8$ ,  $R^1$ - $R^3$ ,  $R^4$ ,  $R^5$  and  $R^6$ - $R^8$  are as defined in claim 31.

43[[13]]. (currently amended) A compound, according to claim 31, in which when  $X^1$ - $X^3$  or  $X^6$ - $X^8$  is C, each respective  $R^1$ - $R^3$  and  $R^6$ - $R^8$  is independently selected from the group consisting of:

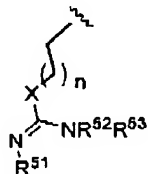
- H, halogen;
- $OR^{23}$ , wherein  $R^{23}$  is H, substituted or unsubstituted alkylcarbonyl, substituted or unsubstituted arylcarbonyl; and
- $O(CH_2)_j-R^{24}$ ,  $O(CH_2)_j-O-R^{24}$ , or  $O(CH_2)_j-S-R^{24}$ , wherein  $j$  is an integer from 1 to 8, and  $R^{24}$  is selected from the group consisting of H, substituted or

unsubstituted C(1-8) alkyl, substituted or unsubstituted aryl, substituted or unsubstituted heteroaryl.

44[[14]]. (currently amended) A compound, according to claim 31, in which  $R^4$  is selected from the group consisting of:

m) H, substituted or unsubstituted C(1-8) alkyl; and

n)

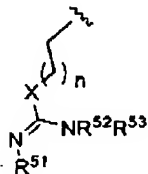


wherein  $X=O$ ,  $S$ , or  $NH$ ,  $n=2$ ; and wherein  $R^{51}$  is H;  $R^{52}$  and  $R^{53}$  are independently chosen from the group consisting of H, substituted or unsubstituted C(1-8)alkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, or  $R^{51}$  and  $R^{52}$  are combined to form a heteroalkyl, substituted heteroalkyl, heteroaryl, or substituted heteroaryl ring system.

45[[15]]. (currently amended) A compound, according to claim 44[[14]], in which  $R^4$  is selected from the group consisting of:

m) H, substituted or unsubstituted C(1-8) alkyl; and

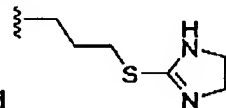
n)



wherein  $X=S$ ,  $n=2$ ; and wherein  $R^{51}$  is H;  $R^{52}$  and  $R^{53}$  are both H, or  $R^{51}$  and  $R^{52}$  are combined to form a heteroaryl ring system.

46[[16]]. (currently amended) A compound, according to claim 45[[15]], in which  $R^4$  is selected from the group consisting of: H, methyl,  $CH_2CH_2CH_2OH$ ,

$CH_2CH_2CH_2NH_2$ ,  $CH_2CH_2CH_2N_3$ ,  $CH_2CH_2CH_2SC(=NH)NH_2$  and

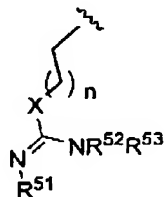


47[[17]]. (withdrawn) A compound, according to claim 31, in which  $X^5$  is N and  $R^5$  is a lone pair.

48[[18]]. (currently amended) A compound, according to claim 31, in which  $X^5$  is C or CH, and  $R^5$  is selected from the group consisting of:

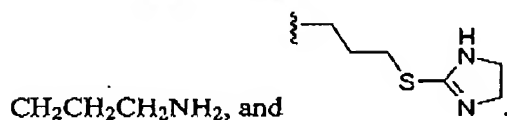
p) H, substituted and unsubstituted C(1-8) alkyl; and

q)

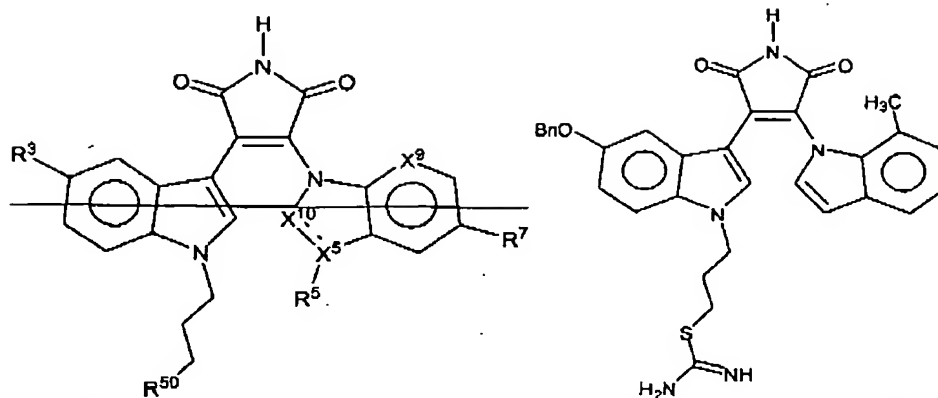


wherein  $X=S$ ,  $n=2$ ; and wherein  $R^{51}$  is H;  $R^{52}$  and  $R^{53}$  are independently chosen from the group consisting of H, substituted or unsubstituted C(1-8) alkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, or  $R^{51}$  and  $R^{52}$  are combined to form a heteroalkyl, substituted heteroalkyl, heteroaryl, or substituted heteroaryl ring system.

49[[19]]. (currently amended) A compound, according to claim 48[[18]], in which  $X^5$  is C or CH, and  $R^5$  is selected from the group consisting of H, methyl,  $CH_2CH_2CH_2OH$ ,  $CH_2CH_2CH_2SC(=NH)NH_2$ ,  $CH_2CH_2CH_2N(CH_3)_2$ ,  $CH_2CH_2CH_2N_3$ ,



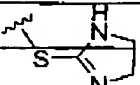
50[[20]]. (currently amended) A compound, according to the following formula



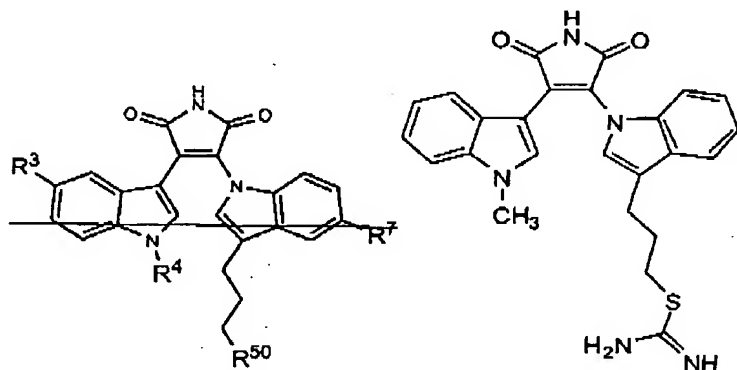
~~selected from the group consisting of:~~

| Cpd. | Bond<br>between<br>$X^6/X^{10}$ | $R^3$ | $R^{50}$                          | $R^7$ | $X^6/R^5$ | $X^9$ | $X^{10}$ |
|------|---------------------------------|-------|-----------------------------------|-------|-----------|-------|----------|
| 121  | Double                          | H     | -OH                               | H     | CH        | CH    | CH       |
| 124  | Double                          | BnO   | -OH                               | H     | CH        | CH    | CH       |
| 125  | Double                          | H     | -OH                               | H     | CMo       | CH    | CH       |
| 126  | Double                          | H     | -OH                               | BnO   | CH        | CH    | CH       |
| 127  | Double                          | H     | -OH                               | H     | CH        | CH    | CMo      |
| 128  | Double                          | H     | -OH                               | H     | N         | CH    | CH       |
| 129  | Double                          | BnO   | -OH                               | H     | CMo       | CH    | CH       |
| 130  | Double                          | H     | -OH                               | H     | CH        | N     | CH       |
| 131  | Double                          | BnO   | -OH                               | H     | CH        | CH    | CMo      |
| 132  | Double                          | H     | -OH                               | F     | CH        | CH    | CH       |
| 133  | Double                          | H     | -N(CH <sub>3</sub> ) <sub>2</sub> | H     | CH        | CH    | CH       |
| 136  | Double                          | BnO   | -N(CH <sub>3</sub> ) <sub>2</sub> | H     | CH        | CH    | CH       |
| 137  | Double                          | H     | -N(CH <sub>3</sub> ) <sub>2</sub> | H     | CMo       | CH    | CH       |
| 138  | Double                          | H     | -N(CH <sub>3</sub> ) <sub>2</sub> | BnO   | CH        | CH    | CH       |
| 139  | Double                          | H     | -N(CH <sub>3</sub> ) <sub>2</sub> | H     | CH        | CH    | CMo      |
| 140  | Double                          | H     | -N(CH <sub>3</sub> ) <sub>2</sub> | H     | N         | CH    | CH       |
| 141  | Double                          | BnO   | -N(CH <sub>3</sub> ) <sub>2</sub> | H     | CMo       | CH    | CH       |
| 142  | Double                          | H     | -N(CH <sub>3</sub> ) <sub>2</sub> | H     | CH        | N     | CH       |
| 143  | Double                          | H     | -SC(=NH)NH <sub>2</sub>           | H     | CH        | CH    | CH       |
| 146  | Double                          | H     | -SC(=NH)NH <sub>2</sub>           | H     | CMo       | CH    | CH       |
| 147  | Double                          | H     | -SC(=NH)NH <sub>2</sub>           | BnO   | CH        | CH    | CH       |
| 148  | Double                          | BnO   | -SC(=NH)NH <sub>2</sub>           | H     | CH        | CH    | CH       |
| 149  | Double                          | BnO   | -SC(=NH)NH <sub>2</sub>           | H     | CH        | CMo   | CH       |
| 150  | Double                          | BnO   | -SC(=NH)NH <sub>2</sub>           | H     | CH        | CH    | CMo      |
| 151  | Double                          | H     | -SC(=NH)NH <sub>2</sub>           | H     | CH        | CH    | CMo      |
| 152  | Double                          | H     | -SC(=NH)NH <sub>2</sub>           | H     | CH        | N     | CH       |
| 153  | Double                          | MeO   | -SC(=NH)NH <sub>2</sub>           | H     | CH        | CH    | CH       |
| 154  | Double                          | F     | -SC(=NH)NH <sub>2</sub>           | H     | CH        | CH    | CH       |
| 155  | Double                          | H     | -SC(=NH)NH <sub>2</sub>           | F     | CH        | CH    | CH       |

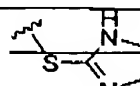


| Cpd. | Bond between $X^5/X^{10}$ | $R^3$                    | $R^{50}$  | $R^7$ | $X^6/R^6$       | $X^9$ | $X^{10}$        |
|------|---------------------------|--------------------------|---|-------|-----------------|-------|-----------------|
| 456  | Double                    | H                        |  | H     | CH              | CH    | CH              |
| 459  | Single                    | H                        | -SC(=NH)NH <sub>2</sub>   | H     | CH <sub>2</sub> | CH    | CH <sub>2</sub> |
| 460  | Double                    | OCH <sub>2</sub> S<br>Ph | -SC(=NH)NH <sub>2</sub>   | H     | CH              | CH    | CH              |
| 464  | Double                    | H                        | -N <sub>3</sub>   | H     | CH              | CH    | CH              |
| 462  | Double                    | H                        | -NH <sub>2</sub>  | H     | CH              | CH    | CH              |

51[[21]]. (currently amended) A compound according to the following formula:



selected from the group consisting of:

| Example | $R^3$ | $R^{50}$  | $R^7$ | $R^4$ |
|---------|-------|---|-------|-------|
| 463     | H     | OH  | H     | H     |
| 464     | H     | OH  | H     | Me    |
| 465     | BnO   | OH  | H     | H     |
| 466     | H     | SC(=NH)NH <sub>2</sub>  | H     | H     |
| 467     | H     | SC(=NH)NH <sub>2</sub>  | H     | Me    |
| 468     | BnO   | SC(=NH)NH <sub>2</sub>  | H     | Me    |
| 469     | H     | N(CH <sub>3</sub> ) <sub>2</sub>  | H     | Me    |
| 470     | H     |  | H     | Me    |
| 471     | H     | N <sub>3</sub>  | H     | Me    |
| 472     | H     | NH <sub>2</sub>   | H     | Me    |

52[[22]]. (currently amended) A composition comprising a compound, according to claim 31, in combination with carrier.

53[[23]]. (withdrawn) The composition, according to claim 52[[22]], further including a chemotherapeutic agent.

54[[24]]. (withdrawn) The composition, according to claim 52[[22]], further including a cytokine.

55[[25]]. (withdrawn) The composition, according to claim 52[[22]], further including anti-sense oligonucleotides.

56[[26]]. (withdrawn) A method of treating an inflammatory disorder, the method comprising: administering to a subject in need thereof an effective amount of a compound or a composition, according to claim 31 or 52[[22]], so as to treat the disorder.

57[[27]]. (withdrawn) A method of treating cancer, the method comprising: administering to a subject in need thereof an effective amount of a compound or a composition, according to claim 31 or 52[[22]], so as to treat the cancer.

58[[28]]. (withdrawn) A method of treating a cell proliferative disorder, the method comprising: administering to a subject in need thereof an effective amount of a compound or a composition, according to claim 31 or 52[[22]], so as to treat the disorder.

59[[29]]. (withdrawn) A method of treating cancer, the method comprising: administering to a subject in need thereof an effective amount of a compound or a composition, according to claim 31 or 52[[22]], in combination with another chemotherapeutic agent.

60[[30]]. (withdrawn) Use of a compound or a composition, according to claim 31 or 52[[22]], so as to induce apoptosis in Jurkat cells.

61[[31]]. (withdrawn) Use of a compound or a composition, according to claim 31 or 52[[22]], so as to induce apoptosis in cancer cell lines.

62[[32]]. (withdrawn) The use, according to claim 31, in which the cancer cell lines are prostate cancer and breast cancer cell lines

63[[33]]. (withdrawn) A method of treatment or prevention of a condition resulting from loss of growth and cellular differentiation control, the method comprising: administration to a subject in need thereof an effective amount of a compound or a composition, according to claim 31 or 52[[22]], so as to treat or prevent the condition.